

Notice of Allowability

Application No.

09/782,791

Examiner

Michael N. Opsasnick

Applicant(s)

GAO, YANG

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to remarks filed 8/25/05.2. ☒ The allowed claim(s) is/are 1-13, 15-47 and 49-70.3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).a) ☐ All b) ☐ Some* c) ☐ None of the:1. ☐ Certified copies of the priority documents have been received.2. ☐ Certified copies of the priority documents have been received in Application No. _____.3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.**Attachment(s)**1. ☐ Notice of References Cited (PTO-892)2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material5. ☐ Notice of Informal Patent Application (PTO-152)6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____7. ☐ Examiner's Amendment/Comment8. ☒ Examiner's Statement of Reasons for Allowance9. ☐ Other _____

W. R. YOUNG
PRIMARY EXAMINER

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-13,15-47,49-70 are allowable over the prior art of record.

2. The following is an examiner's statement of reasons for allowance:

As per independent claims 1,16,30,45,55, and 63, the recited limitations pertaining to a second stage noise reduction of a time based version of an already frequency noise reduced signal is not explicitly taught by the prior art of record. An example of the prior art of record is Ertem et al. (6,453,289) disclosing noise reduction gain codebooks (performed in the frequency domain → col. 3 lines 43-49; col. 11 lines 59-61). Borth et al (4630304) teaches a noise reduction system focusing on adjusting the gain according to the noise floor and noise estimates by performing a/d, time to frequency conversion, background noise estimation and removal, and conversion back to the time domain (Borth et al (4630304), col. 3 line 35 – col. 4 line 2), however, the system in Borth, albeit showing time domain conversion, does not perform the frequency based ,then time based, consecutive, noise reduction system. Furthermore, it would not have been obvious to one of ordinary skill in the art of noise reduction systems to modify the teachings of the prior art of record to obtain the recited limitations of the independent claims noted above.

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Dependent claims 2-13,14,17-29,31-44,,46,47,49-54,56-70 are allowable over the prior art of record because these claims depend from independent claims that have been determined to be allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Wayne Young, can be reached at (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mno
11/9/05



W. R. YOUNG
PRIMARY EXAMINER